

RECEIVED
MAR 16/2003
TECH CENTER 1600/2003

Serial Number: 09/249,011B

CRF Processing Date:
 Edited by:
 Verified by:
 (Name)

ENTERED

- ☐ Changed a file from non-ASCII to ASCII
- ☐ Changed the margins in cases where the sequence text was "wrapped" down to the next line.
- ☐ Edited a format error in the Current Application Data section, specifically: _____
- ☐ Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other _____
- ☐ Added the mandatory heading and subheadings for "Current Application Data".
- ☐ Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- ☐ Changed the spelling of a mandatory field (the headings or subheadings), specifically: _____
- ☐ Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: _____
- ☐ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: _____
- ☐ Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- ☐ Inserted colons after headings/subheadings. Headings edited included: _____
- ☐ Deleted extra, invalid, headings used by an applicant, specifically: _____
- ☒ Deleted: ☒ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/filename at end of file; ☐ page numbers throughout text; ☐ other invalid text, such as _____
- ☐ Inserted mandatory headings, specifically: _____
- ☐ Corrected an obvious error in the response, specifically: _____
- ☐ Edited identifiers where upper case is used but lower case is required, or vice versa.
- ☐ Corrected an error in the Number of Sequences field, specifically: _____
- ☐ A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- ☐ Deleted **ending** stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: _____
- ☐ Other: _____

*Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.

RECEIVED

MAR 10

TECHNOLOGY

1600

RAW SEQUENCE LISTING

DATE: 03/06/2003

PATENT APPLICATION: US/09/249,011B

TIME: 19:09:45

Input Set : A:\PTO.AMC.txt

Output Set : N:\CRF4\03062003\I249011B.raw

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3 <110> APPLICANT: Co, Man Sung
4 Vasquez, Maximiliano
5 Carreno, Beatriz
6 Delniker, Abbie Cheryl
7 Collins, Mary
8 Goldman, Samuel
9 Gray, Gary A.
10 Knight, Andrea
11 O'Hara, Denise
12 Kuo, Rosita
13 Veldman, Geertruida M.
15 <110> TITLE OF INVENTION: HUMANIZED IMMUNOGLOBULIN REACTIVE WITH B7-2 MOLECULES AND
METHODS OF
16 TREATMENT THEREWITH
18 <130> FILE REFERENCE: 08790.1.1981-00000
19 <140> CURRENT APPLICATION NUMBER: 09/249,011B
21 <141> CURRENT FILING DATE: 1999-02-12
23 <160> NUMBER OF SEQ ID NOS: 52
25 <170> SOFTWARE: PatentIn version 3.1
27 <210> SEQ ID NO: 1
28 <211> LENGTH: 405
29 <212> TYPE: CNA
30 <213> ORGANISM: Murine anti-B7-2 heavy chain
32 <216> FEATURE:
33 <211> NAME/KEY: CDS
34 <212> LOCATION: (1)..(405)
35 <220> OTHER INFORMATION:
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39 Met Gly Trp Asn Cys Ile Ile Phe Phe Leu Val Thr Thr Ala Thr Gly
40 1 5 10 15
41 gtc cac tcc cag gtc cag ctg cag cag tct ggg cct gag ctg gtg agg 96
42 Val His Ser Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Arg
43 20 25 30
44 cct ggc gaa tca gtc aag att tcc tgc aag ggt tcc ggc tac aca ttc 144
45 Pro Gly Glu Ser Val Lys Ile Ser Cys Lys Gly Ser Gly Tyr Thr Phe
46 35 40 45
47 acc gat tat gct ata cag tgc gtg aag cag agt cat gca aag agt cta 192
48 Thr Asp Tyr Ala Ile Gln Trp Val Lys Gln Ser His Ala Lys Ser Leu
49 50 55 60
50 gag tgg att gga gtt att aat att tac tat gat aat aca aac tac aac 240
51 Glu Trp Ile Gly Val Ile Asn Ile Tyr Tyr Asp Asn Thr Asn Tyr Asn
52 65 70 75 80
53 cac aag ttt aag ggc aag gcc aca atg act gta gac aaa tcc tcc agc 288

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RAW SEQUENCE LISTING

DATE: 03/06/2003

PATENT APPLICATION: US/09/249,011B

TIME: 13:09:45

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\03062003\I249011B.raw

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59 Gln Lys Phe Lys Gly Lys Ala Thr Met Thr Val Asp Lys Ser Ser Ser
60          25          90          95
61 aca gac tat atg gaa ctt gcc aga ttg aca tct gag gat tct gcc atc 336
62 Thr Ala Tyr Met Glu Leu Ala Arg Leu Thr Ser Glu Asp Ser Ala Ile
63          35          105          110
64 tat taa ttt gaa aga ggg gcc ttg tat atg gac taa tgg ggt caa gga 384
65 Tyr Tyr Cys Ala Arg Ala Ala Trp Tyr Met Asp Tyr Trp Gly Gln Gly
66          115          120          125
67 acc taa gta aat gta taa taa
68          130          135
69 Thr Ser Val Thr Val Ser Ser
70          130          135

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71 <119> SEQ ID NO: 1

72 <119> LENGTH: 135

73 <119> TYPE: PRT

74 <119> ORGANISM: Murine anti-B7-2 heavy chain

80 <400> SEQUENCE: 2

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82          5          15
83 Val His Ser Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Arg
84          20          25          30
85 Pro Gly Gln Ser Val Lys Ile Ser Cys Lys Gly Ser Gly Tyr Thr Phe
86          35          40          45
87 Thr Asp Tyr Ala Ile Gln Trp Val Lys Gln Ser His Ala Lys Ser Leu
88          50          55          60
89 Glu Trp Ile Gly Val Ile Asn Ile Tyr Tyr Asp Asn Thr Asn Tyr Asn
90          65          70          75          80
91 Gln Lys Phe Lys Gly Lys Ala Thr Met Thr Val Asp Lys Ser Ser Ser
92          85          90          95
93 Thr Ala Tyr Met Glu Leu Ala Arg Leu Thr Ser Glu Asp Ser Ala Ile
94          100          105          110
95 Tyr Tyr Cys Ala Arg Ala Ala Trp Tyr Met Asp Tyr Trp Gly Gln Gly
96          115          120          125
97 Thr Ser Val Thr Val Ser Ser
98          130          135

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100 <119> SEQ ID NO: 1

101 <119> LENGTH: 396

102 <119> TYPE: DNA

103 <119> ORGANISM: Murine anti-B7-2 light chain

104 <119> FEATURE:

105 <119> NAME/KEY: CDS

106 <119> LOCATION: (1)..(396)

107 <119> OTHER INFORMATION:

W--> 128 <400> 3

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129 atc gat taa cag gcc cag ctt ctt ata ttg ctg ctg cta tgg gta tct 48
130 Met Asp Ser Gln Ala Gln Val Leu Ile Leu Leu Leu Trp Val Ser
131          5          10          15
132 ggt acc tct ggg gac att gtg ctg tca cag tct cca tcc tcc ctg gct 96
133 Gly Thr Cys Gly Asp Ile Val Leu Ser Gln Ser Pro Ser Ser Leu Ala
134          20          25          30

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RAW SEQUENCE LISTING

DATE: 03/06/2003

PATENT APPLICATION: US/09/249,011B

TIME: 10:09:45

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\03062003\I249011B.raw

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137 atg tca gaa gga gag aag gtc act atg agc tgc aaa tcc agt cag agt      144
138 Val Ser Ala Gly Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser
139          35          40          45
141 atg ttc ttc agt aga aac cga gag aac tac tgc ggt tgg tac cag cag      192
142 Leu Leu Asn Ser Arg Thr Arg Glu Asn Tyr Leu Ala Trp Tyr Gln Gln
143          50          55          60
145 aaa cca ggc cag tct cct aaa ctg ctg atc tac tgg gca tcc act aag      240
146 Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg
147          65          70          75          80
149 aaa tct ggg gtc cct gat cgc ttc aaa ggc agt gaa tct ggg aca gat      288
150 Glu Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp
151          85          90          95
153 ttc act ctc acc atc agc agt gtc cag gct gaa gac ctg gaa gtt tat      336
154 Phe Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr
155          100          105          110
157 tac tgc aac caa tct tat aat ctt tac aag ttc gaa ggg ggg acc aag      384
158 Tyr Cys Thr Gln Ser Tyr Asn Leu Tyr Thr Phe Gly Gly Gly Thr Lys
159          115          120          125
161 atg gaa ata aaa      396
162 Leu Glu Ile Lys
163          130
165 <110> SEQ ID NO: 4
167 <111> LENGTH: 13.
168 <112> TYPE: PRT
169 <113> ORGANISM: Murine anti-B7-2 light chain
171 <400> SEQUENCE: 4
172 Met Asp Ser Gln Ala Gln Val Leu Ile Leu Leu Leu Leu Trp Val Ser
173          5          10          15
177 Gly Thr Cys Gly Asp Ile Val Leu Ser Gln Ser Pro Ser Ser Leu Ala
178          20          25          30
181 Val Ser Ala Gly Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser
182          35          40          45
184 Leu Leu Asn Ser Arg Thr Arg Glu Asn Tyr Leu Ala Trp Tyr Gln Gln
185          50          55          60
189 Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg
190          65          70          75          80
193 Glu Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp
194          85          90          95
197 Phe Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr
198          100          105          110
201 Tyr Cys Thr Gln Ser Tyr Asn Leu Tyr Thr Phe Gly Gly Gly Thr Lys
202          115          120          125
204 Leu Glu Ile Lys
205          130
207 <110> SEQ ID NO: 5
210 <111> LENGTH: 405
211 <112> TYPE: DNA
212 <113> ORGANISM: Humanized murine anti-human B7-2 heavy chain
214 <120> FEATURE:

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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/249,011B

DATE: 03/06/2003

TIME: 11:19:45 AM

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\03062003\I249011B.raw

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TECH CENTER 1600/2900

215 <221> NAME/KEY: CDS
 216 <222> LOCATION: (1)..(405)
 217 <223> OTHER INFORMATION:

W--> 219 <400> 5

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220 atg ggt tgg aac tat atc atc ttc ttt ctg gtt acc aca gct aca ggt      48
221 Met Gly Trp Asn Cys Ile Ile Phe Phe Leu Val Thr Thr Ala Thr Gly
222 1      5      10      15
223 gaa caa too aag gtc cag ctg gtg cag tat ggg gct gag gtg aag aag      96
224 Val His Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys
225 16      25      30      35
226 cct tgg aag taa atg aag gtg too taa aaa gct too ggc tac aca ttc      144
227 Pro Gly Ser Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe
228 36      45      50      55
229 act tat tat gct aca cag tgg gtg aca cag gct cct gga gag ggc ctg      192
230 Thr Asp Tyr Ala Ile Gln Trp Val Arg Gln Ala Pro Gly Gln Gly Leu
231 66      75      80      85
232 aag aag att gaa gtt att aat att tac tat gat aat aca aac tac aac      240
233 Glu Trp Ile Gly Val Ile Asn Ile Tyr Tyr Asp Asn Thr Asn Tyr Asn
234 96      105      110      115
235 cag aag ttt aag gac aag gac aca aag act gta pac aac too aag aag      288
236 Gln Lys Phe Lys Gly Lys Ala Thr Met Thr Val Asp Lys Ser Thr Ser
237 126      135      140      145
238 aca acc tat atg gaa ctt agt tct ttc aca tct gag gat aag gac gtt      336
239 Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val
240 156      165      170      175
241 tat taa tgt aca aca gag gac tgg tat atg gac tac tgc ggt aca ggt      384
242 Tyr Tyr Cys Ala Arg Ala Ala Trp Tyr Met Asp Tyr Trp Gly Gln Gly
243 186      195      200      205
244 aac att gtc aac gtc too taa      405
245 Thr Ser Val Thr Val Ser Ser
246 216      225      230
247 <10> SEQ ID NO: 6
248 <11> LENGTH: 135
249 <12> TYPE: PRT
250 <13> ORGANISM: Humanized murine anti-human B7-2 heavy chain
251 <400> SEQUENCE: 6
252 Met Gly Trp Asn Cys Ile Ile Phe Phe Leu Val Thr Thr Ala Thr Gly
253 1      5      10      15
254 Val His Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys
255 16      25      30      35
256 Pro Gly Ser Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe
257 36      45      50      55
258 Thr Asp Tyr Ala Ile Gln Trp Val Arg Gln Ala Pro Gly Gln Gly Leu
259 66      75      80      85
260 Glu Trp Ile Gly Val Ile Asn Ile Tyr Tyr Asp Asn Thr Asn Tyr Asn
261 96      105      110      115
262 Gln Lys Phe Lys Gly Lys Ala Thr Met Thr Val Asp Lys Ser Thr Ser
263 126      135      140      145
264 Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val

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RAW SEQUENCE LISTING

DATE: 03/06/2003

PATENT APPLICATION: US/09/249,011B

TIME: 19:09:45

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\03062003\I249011B.raw

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299              100              105              110
300 Tyr Tyr Cys Ala Arg Ala Ala Trp Tyr Met Asp Tyr Trp Gly Gln Gly
301              115              120              125
302 Thr Leu Val Thr Val Ser Ser
303              130              135

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#00 <10> SEQ ID NO: 7

#01 <11> LENGTH: 396

#02 <12> TYPE: DNA

#03 <13> ORGANISM: Humanized murine anti-human B7-2 light chain

#04 <14> FEATURE:

#05 <15> NAME/KEY: CDS

#06 <16> LOCATION: (1)..(396)

#07 <17> OTHER INFORMATION:

W--> 310 <400> 7

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311 atg gat tca cag gcc cag gtt ctc ata tgg ctg ctg cta tgg gta tct      43
312 Met Asp Ser Gln Ala Gln Val Leu Ile Leu Leu Leu Leu Trp Val Ser
313 1          5          10          15
314 gaa acc tgt ggg gaa att gtg ctg aca cag tct cca gat tcc ctg gct      96
315 Gly Thr Cys Gly Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala
316 16          20          25          30
317 gta agc tta gta gag agg gcc act att agc tgc aaa tcc agt cag agt      144
318 Val Ser Leu Gly Glu Arg Ala Thr Ile Ser Cys Lys Ser Ser Gln Ser
319 31          35          40          45
320 ctg ctc aac agt aga acc cga gag aac tac ctg gct tgg tac cag cag      192
321 Leu Leu Asn Ser Arg Thr Arg Glu Asn Tyr Leu Ala Trp Tyr Gln Gln
322 46          50          55          60
323 aaa tca ggc cag gct cct aaa ctg ctg atc tac tgg gaa tcc act agg      240
324 Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg
325 61          65          70          75          80
326 gaa tct tga gta cct gat tgc ttc agt ggc agt gga tct ggg aca gat      288
327 Glu Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
328 81          85          90          95
329 ttc act ctc acc atc agc agt ctg cag gct gaa gag gtg gaa gtt tat      336
330 Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr
331 96          100          105          110
332 tac tga aac cca tct tat aat ctt tac aag ttc gga cag ggg acc aag      384
333 Tyr Cys Thr Gln Ser Tyr Asn Leu Tyr Thr Phe Gly Gln Gly Thr Lys
334 111          115          120          125
335 gta gaa ata aac
336 Val Glu Ile Lys
337 126

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#08 <18> SEQ ID NO: 8

#09 <19> LENGTH: 131

#10 <20> TYPE: PRT

#11 <21> ORGANISM: Humanized murine anti-human B7-2 light chain

#12 <22> SEQUENCE: 2

311 Met Asp Ser Gln Ala Gln Val Leu Ile Leu Leu Leu Leu Trp Val Ser

312 1 5 10 15

313 Gly Thr Cys Gly Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala

VERIFICATION SUMMARY

DATE: 03/06/2003

PATENT APPLICATION: US/09/249,011B

TIME: 19:09:46

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\03062003\I249011B.raw

L:37 M:258 W: Mandatory Feature missing, <L13> Blank for SEQ#:1,Line#:35
L:128 M:258 W: Mandatory Feature missing, <L13> Blank for SEQ#:3,Line#:126
L:219 M:258 W: Mandatory Feature missing, <L13> Blank for SEQ#:5,Line#:217
L:310 M:258 W: Mandatory Feature missing, <L13> Blank for SEQ#:7,Line#:308
L:430 M:281 W: Numeric Fields not Ordered, <L11> Sort in ascending order!
L:434 M:258 W: Mandatory Feature missing, <L13> Tag not found for SEQ ID#:11
L:470 M:281 W: Numeric Fields not Ordered, <L11> Sort in ascending order!
L:473 M:258 W: Mandatory Feature missing, <L13> Tag not found for SEQ ID#:13
L:501 M:281 W: Numeric Fields not Ordered, <L11> Sort in ascending order!
L:504 M:258 W: Mandatory Feature missing, <L13> Tag not found for SEQ ID#:15
L:540 M:281 W: Numeric Fields not Ordered, <L11> Sort in ascending order!
L:543 M:258 W: Mandatory Feature missing, <L13> Tag not found for SEQ ID#:17
L:571 M:281 W: Numeric Fields not Ordered, <L11> Sort in ascending order!
L:574 M:258 W: Mandatory Feature missing, <L13> Tag not found for SEQ ID#:19
L:1436 M:361 W: Invalid Split Codon, Sequence data for SEQ ID#: 43